

ABSTRACT

[0066] A top ring is designed to have a gas seal function and an oil control function in order to realize approximately the same amount of oil consumption and blow-by gas as those realized by three rings, by using the top ring only. A piston assembly includes a piston body and a piston ring having a U-shaped cross section. The piston body has a top land portion and a ring groove formed on its periphery. The piston ring includes an upper leg portion, a lower leg portion, and a base portion connecting the upper and lower leg portions, and is attached to the top land portion of the piston body. An axial length from a boundary of the base portion of the piston ring and the upper leg portion to a lower surface of the lower leg portion is set to be larger than an axial length from an upper surface of the top land portion of the piston body to a lower surface of the ring groove to which the lower leg portion is fitted. Alternatively, axial grooves are provided on a thrust side of the top land portion. Alternatively, a V-shaped annular groove is provided in a second land portion of the piston body. The piston ring may include an upper periphery having a BF (barrel face) shape and a lower periphery formed as a straight or tapered contact face.